

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY



(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

REC'D 28 NOV 2005

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Applicant's or agent's file reference K2140PCT		FOR FURTHER ACTION See Form PCT/PEA/416	
International application No. PCT/EP2004/007178		International filing date (day/month/year) 01.07.2004	Priority date (day/month/year) 14.08.2003
International Patent Classification (IPC) or national classification and IPC B65D81/32, A61C5/06			
Applicant 3M ESPE AG et al.			
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 11 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> sent to the applicant and to the International Bureau) a total of 3 sheets, as follows:</p> <p><input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in Item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (Indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>			
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the opinion</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input checked="" type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input checked="" type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>			
Date of submission of the demand 03.06.2005		Date of completion of this report 29.11.2005	
Name and mailing address of the international preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016		Authorized Officer Fournier, J Telephone No. +31 70 340-1031 	

**INTERNATIONAL PRELIMINARY REPORT
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International application No.
PCT/EP2004/007178

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

Description, Pages

1-45 as originally filed

Claims, Numbers

7-80 as originally filed

1-6 received on 03.06.2005 with letter of 03.06.2005

Drawings, Sheets

1/25-3/25, 5/25-25/25 as originally filed

4/25 received on 06.10.2004 with letter of 06.10.2004

☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):
4. ☒ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages
 - ☒ the claims, Nos. 1
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):

* If item 4 applies, some or all of these sheets may be marked "superseded."

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Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:
- ☐ the entire international application,
 - ☒ claims Nos. 8-74
- because:
- ☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (specify):
 - ☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. are so unclear that no meaningful opinion could be formed (*specify*):
 - ☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.
 - ☒ no international search report has been established for the said claims Nos. 8-74
 - ☐ the nucleotide and/or amino acid sequence listing does not comply with the standard provided for in Annex C of the Administrative Instructions in that:
 - the written form ☐ has not been furnished
 - ☐ does not comply with the standard
 - the computer readable form ☐ has not been furnished
 - ☐ does not comply with the standard
 - ☐ the tables related to the nucleotide and/or amino acid sequence listing, if in computer readable form only, do not comply with the technical requirements provided for in Annex C-*bis* of the Administrative Instructions.
 - ☐ See separate sheet for further details

**INTERNATIONAL PRELIMINARY REPORT
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Box No. IV Lack of unity of invention

1. ☐ In response to the invitation to restrict or pay additional fees, the applicant has:
- ☐ restricted the claims.
 - ☐ paid additional fees.
 - ☐ paid additional fees under protest.
 - ☐ neither restricted nor paid additional fees.
2. ☒ This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.
3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is
- ☐ complied with.
 - ☐ not complied with for the following reasons:
4. Consequently, this report has been established in respect of the following parts of the international application:
- ☐ all parts.
 - ☒ the parts relating to claims Nos. 1-7, 75-80 .

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1,2,4,5-6,7,78-80
	No: Claims	3,75,77
Inventive step (IS)	Yes: Claims	1,2,4,5-6,7
	No: Claims	3,75,77-80
Industrial applicability (IA)	Yes: Claims	1-7,75-80
	No: Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

Re Item I

Basis of the report

The amended claim 1 goes beyond the disclosure as filed, because it introduces fresh subject-matter.

According to the description page 21, lines 19-21 and the figures 1 and 2, the two chambers are formed by a part of the cartridge (the interior wall) and a partition wall. A wording including "**at least** by a part of the cartridge" as in amended claim 1 would be quite different from that originally disclosed because the chambers could be formed by part of the cartridge and a partition wall and by additional elements. Hence, the amendment is unallowable. Therefore, claim 1 has been examined as if the last lines of the second paragraph reads "the two chambers being formed by a part of the cartridge and a partition wall".

Re Item IV.

This Authority considers that there are 4 inventions covered by the claims indicated as follows:

Invention I (claims 1, 7, 75, 77-80) relates to a capsule having one piston.

Invention II (claims 2, 75, 76, 77-80) relates to a capsule having two pistons, their rear ends lying outside the component chambers.

Invention III (claims 3, 75, 77-80) relates to a capsule having two component chambers being at least partially delimited by a first foil and by a second foil.

Invention IV (claims 4-6, 75, 77-80) relates to a capsule having a housing comprising an outlet and two pistons.

Claims 75, 77-80 are drafted in such a way that they can belong to each one of the four inventions.

**INTERNATIONAL PRELIMINARY
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(SEPARATE SHEET)**

International application No.

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Re Item V.

1 Documents

The following documents are referred to in this communication:

- D1 : WO 01/44065 A (GREEN RONALD D) 21 June 2001 (2001-06-21)
- D2 : US 2003/111490 A1 (PIERSON PAUL RICHARD) 19 June 2003 (2003-06-19)
- D3: US-A-5 249 709 (CLEMENS RICHARD W ET AL) 5 October 1993 (1993-10-05)
- D4 : EP 0 249 701 A (THREE BOND CO LTD) 23 December 1987 (1987-12-23)
- D5: US-A-5 535 922 (MAZIARZ BERNARD J) 16 July 1996 (1996-07-16)
- D6: DE 92 06 892 U (IHDE) 3 December 1992 (1992-12-03)

2 First Invention: Claims 1, 7, 75, 77-80

2.1 INDEPENDENT CLAIM 1

The document D1 is regarded as being the closest prior art to the subject-matter of claim 1, and shows (the references in parenthesis applying to this document): a capsule for two components of a material which are to be mixed together, comprising:

- a cartridge (6) comprising an outlet, a first component chamber (8) for containing a first component and a second chamber (8) for containing a second component, the two chambers (8) opening into the outlet
- a piston which at least with its front end sits in the cartridge, lies with its rear end outside the component chambers and, when it is pushed forwards, presses the two component out of their component chambers, see figures and the passage of page 3, lines 8-21.

The subject-matter of claim 1 differs from this known capsule in that the two chambers are formed by a part of the cartridge and a partition wall.

The subject-matter of claim 1 is therefore new (Article 33(2) PCT).

The problem to be solved by the present invention may be regarded as providing a capsule with less elements.

The solution to this problem proposed in claim 1 of the present application is considered as involving an inventive step (Article 33(3) PCT) because the prior art teaches away from this solution by showing embodiments comprising chambers in the form of closed bags.

2.2 Claims 7, 75, 77-80, when related to invention I, meet the requirements of the PCT with respect to novelty and inventive step.

3 Second invention: Claims 2, 75, 76, 77-80:

3.1 INDEPENDENT CLAIM 2

Document D2, which is considered to represent the most relevant state of the art for claim 2, discloses a capsule for two or more components of a material which are to be mixed together. D2 does not disclose the following technical features of claim 2: two pistons lying with their rear ends outside the component chambers and, when they are pushed forwards, pressing the two components out of their component chambers.

The subject-matter of claim 2 is therefore novel (Article 33(2) PCT). It further involves an inventive step (Article 33(3) PCT).

3.2 INDEPENDENT CLAIM 76

Claim 76 relates to a method for producing a capsule according to any of the preceding claims. Document D3, which is considered to represent the most relevant state of the art for claim 76, only discloses a capsule having a seal at the rear opening of each component chamber.

The subject-matter of claim 76 is therefore novel (Article 33(2) PCT). It further involves an inventive step (Article 33(3) PCT).

3.3 Claims 75, 77-80, when related to invention II, meet the requirements of the PCT with respect to novelty and inventive step.

4 Third invention: Claims 3, 75, 77-80

- 4.1 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 3 is not new in the sense of Article 33(2) PCT.

Document D6 discloses a capsule for two components of a material which are to be mixed together, comprising:

a cartridge comprising an outlet (13), a first component chamber (A) for containing a first component, and a second component chamber (B) for containing a second component, the two component chambers opening into the outlet (13), see figure 2a, and;

the first component chamber (A) being at least partially delimited by a foil (4), and the second component chamber (B) being at least partially delimited by a second foil (5), see figures of D6.

As Document D6 discloses all the technical features of claim 3, the subject matter of this claim is not new.

- 4.2 Claim 75 can be related to claim 3, as step a) of claim 75 reads "a capsule according to any of the preceding claims is produced". In that case, the subject matter of claim 75 is not new, see D6, figure 5.

4.3 Claims 77-80

Claims 77-80, when related to invention III, do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty and/or inventive step.

5 Fourth invention: Claims 4-6 ,75, 77-80

5.1 Claim 4:

Document D5, which is considered to represent the most relevant state of the art for claim 4, discloses a capsule for two components of a material which are to be mixed together, the capsule comprising a housing, a cartridge and two pistons. However, D5 does not disclose the following technical features of claim 4:
a housing comprising an outlet, this outlet being connected to the cartridge chamber.

The subject-matter of claim 4 is therefore novel (Article 33(2) PCT). It further involves an inventive step (Article 33(3) PCT).

5.2 The subject matter of independent claims 5 and 6 is also novel and involves an inventive step.

5.3 Claims 75, 77-80, when related to invention IV, meet the requirements of the PCT with respect to novelty and inventive step.

< chambers being formed at least by a part of the cartridge and a partition wall, both >

CLAIMS

1. Capsule for two or more components of a material which are to be mixed together, comprising:
- a cartridge comprising an outlet, a first component chamber for containing a first component, and a second component chamber for containing a second component, the two chambers opening into the outlet; and
 - a piston which at least with its front end sits in the cartridge, lies with its rear end outside the component chambers and, when it is pushed forwards, presses the two components out of their component chambers.
2. Capsule for two or more components of a material which are to be mixed together, comprising:
- a cartridge comprising an outlet, a first component chamber for containing a first component, and a second component chamber for containing a second component, the two component chambers opening into the outlet;
 - a first piston which at least with its front end sits in the first component chamber, and a second piston which at least with its front end sits in the second component chamber, which two pistons lie with their rear ends outside the component chambers and, when they are pushed forwards, press the two components out of their component chambers.
3. Capsule for two or more components of a material which are to be mixed together, comprising:
- a cartridge comprising an outlet, a first component chamber for containing a first component, and a second component chamber for containing a second component, the two component chambers opening into the outlet; and

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- the first*
- ~~each of the two~~ component chambers being at least partially delimited by a ^{first} foil, *and the second component chamber being at least partially delimited by a second foil.*

4. Capsule for two or more components of a material which are to be mixed together, comprising:

- 5 - a cartridge comprising a first component chamber for containing a first component and a second component chamber for containing a second component;
- a housing comprising an outlet and a cartridge chamber for holding the cartridge, the cartridge chamber being connected to the outlet;
- 10 - a first piston for movement within the first component chamber, and a second piston for movement within the second component chamber.

5. Capsule for two or more components of a material which are to be mixed together, comprising:

- 15 - a first cartridge comprising a first component chamber for containing a first component, and a second cartridge comprising a second component chamber for containing a second component;
- a housing comprising an outlet and a cartridge chamber for holding the cartridges, the cartridge chamber being connected to the outlet;
- 20 - a first piston for movement within the first component chamber, and a second piston for movement within the second component chamber.

6. Capsule for two or more components of a material which are to be mixed together, comprising:

- 25 - a first cartridge comprising a first component chamber for containing a first component, and a second cartridge comprising a second component chamber for containing a second component;
- a housing comprising an outlet, a first cartridge chamber for holding the first cartridge, and a second cartridge chamber for holding the

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FIG. 9

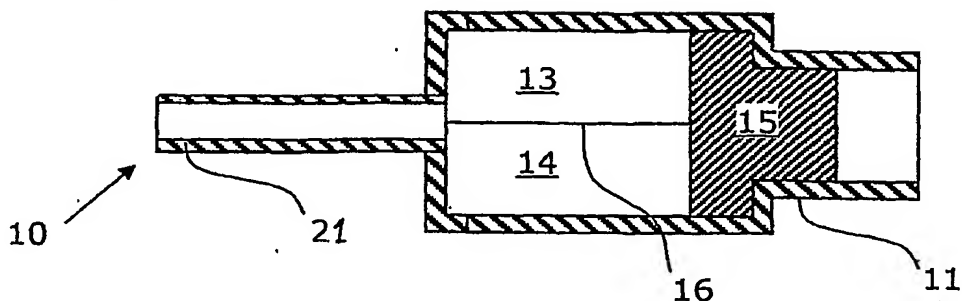


FIG. 10

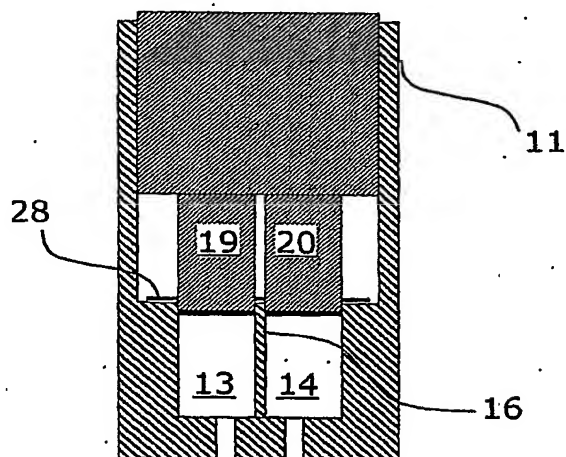
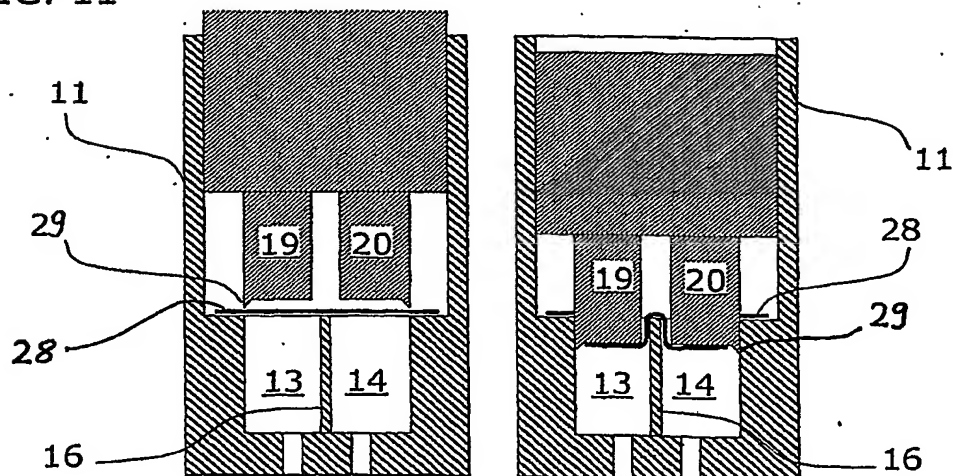


FIG. 11



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